"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

SPITSYN, Viktor I.; POSHKUDEM'YANSKAYA, G.V.

Reaction of phosphotungstic acid and its trisubstituted sodium salt with caustic soda. Zhur. neorg. khim. 10 no.3:657-661 Mr '65. (MIRA 18:7)

1. Kafedra neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSHOBEYEVSKAYA, L.

Korea, North

Stop the villains. Sov. zhen., 3, no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKAYA, Lyubov' Timofeyevna [Kasmadziamianskaia, L.TS.]

Friendship strengthened through the shedding of our heroes' blood. Rab.i sial. 36 no.2:6 F '60. (MIRA 13:6)
(White Russia--Women)

cm. and 25-32 cm. Out of [illegible] varying soil and climatic conditions, in only 42 did plowing without the moldboard result in any increase in yield; in 26 the exact yield was obtained as with ordinary plowing, and in 18 cases there was a significant decline in yield. When [illegible] used [illegible]

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

Card 1/3

[illegible] ted for a long time gave no increase in yield compared

Card 2/3

Card 3/3

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

S/035/62/000/012/029/064
A001/A101

AUTHOR: Kosmodem'yanskiy, A.

TITLE: The satellite in flight

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 12, 1962, 85, abstract 12A631 ("Aviatsiya i kosmonavtika", 1962, no. 7, 49 - 53)

TEXT: The classical problem of two bodies is expounded in application to motion of Earth's artificial satellites.

[Abstracter's note: Complete translation]

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 16613-63 EPA(b)/EWT(l)/FCC(w)/FS(v)-2/BDS/ES(v) AFMDC/ESD-3/APGC
SSD/AFFTC Pd-4/Pe-4/Pg-4/Po-4/Pq-4 GW

S/124/63/000/004/001/064

12

AUTHOR: Kosmodem'yanskiy, A.

TITLE: Sputnik in flight

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1963, 13, abstract 4A57. (Aviatsiya i kosmonavtika, no. 7, 1962, 49-53)

TEXT: The author discusses the problem of motion of artificial earth satellites at great heights; the problem is equivalent to the classical one regarding the motion of a material point under the effect of a central force. The concepts of the first and second cosmic velocities and their numerical values for the earth and other planets of the solar system are discussed. Formulas are adduced for computing the velocity of a sputnik and the period of its rotation as a function of its height. L. S. Yevdokimova.

[Abstracter's note: Complete translation.]

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 12863-63 EPA(b)/EWT(d)/EWT(l)/EWT(m)/FAS/BDS/FCC(w)/FS(v)/T-2/ES(v) AFFTC/ASD/AFMDC/ESD-3/APGC/SSD Pd-4/Pe-4/Pg-4/Po-4/Pq-4 TF

ACCESSION NR: AP3004315 S/0055/63/000/004/0070/0076 88

AUTHOR: Kosmodem'yanskiy, A. A.

TITLE: Variational problems in dynamics of orbital aircraft

SOURCE: Moscow. Universitet. Vestnik. Ser. 1. Matematika, mekhanika, no. 4, 1963, 70-76

TOPIC TAGS: orbital flight, orbital aircraft, variational problem, reciprocal isoperimetric problem

ABSTRACT: The optimal conditions of motion of an orbital aircraft with a liquid-propellant reactor power plant are studied under the assumptions that 1) velocities are cosmic ($M > 10$), 2) altitude is on the order of 60 to 100 km, and 3) the effect of aerodynamic forces is substantial. The mass variation law for an orbital aircraft is established, and equations of extremals are derived for those flight conditions which would provide for maximum range and maximum flight time with a given propellant reserve. Two reciprocal isoperimetric problems are studied, and extremals for range and flight time are found. A calculation sequence is presented for the simplest flight regime, in which $T = T_{max}$ and v_1 tends to infinity (case of the flat earth). The expression

Card 1/2

Card 2/2

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, ARKADIY ALEKSANDROVICH

Kteorii lobobogo sporotivle niia. Chast'III. O vikhrevom soprotivlenii. Moskva, 1935. 18 p., diagrs. (Tsagi. Trudy, no. 216)

Summary in English.

Title tr.: Contribution to the drag theory. Part III. Vortex resistance.

QA 911,M65 no.216

SO: AERONAUTICAL SCIENCES AND AVIATION IN THE SOVIET UNION, LIBRARY OF CONGRESS, 1955

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, ARKADIY ALEKSANDROVICH.

K teorii lobovogo soprotivleniia. I. Priblizhennoe integrirovanie differentsial'nogo uravneniia laminarnogo pogranichnogo sloia. (TSAGI. Trudy, 1935, no. 215, p. 3-20, diagrs.)
Summary in English.

Title tr.: Contribution to drag theory. I. Method of approximate integration of differential equation of the laminar boundary layer.

TA911. M65 no. 215

SO. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, ARKADIY ALEKSANDROVICH.

K teorii lobovogo soprotivleniia. II. Teoreticheskii raschet profil'nogo soprotivleniia rulia Zhukovskogo. (TSAGI. Trudy, 1935, no. 215, p. 21-34, diagrs.)

Summary in English.

Title tr.: Contribution to drag theory. II. Theoretical determination of the profile drag of Zhukovskii-type rudder.

QA911. M65 no. 215

SO. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSHODEM'YANSKIY, ARKADIY ALEKSANDROVICH

Vikhrevoe soprotivienie teoreticheskikh profilei. Moskva, 1937. 58 p., plates, diagrs. (TSAGI. Trudy, no. 317)

Title tr.: Eddy resistance of theoretical airfoils.

QA911. M65 no. 317

SO. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, ARKADIY ALEKSANDROVICH.

Lobovoe soprotivlenie kryl'ev S.A. Chaplygina. 'Kryl'ia tipa inversii ellipsa). (Moscow. Universitet. Uchenye zapiski, 1937, no.7: Mekhanika. p.103-111)

Summary in French.

Title tr.: Drag of Chaplygin wings. (Wings of the inverted ellipse type.)

Q60.M868 1937, no.7

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, ARKADIY ALEKSANDROVICH.

K probleme vikhrevogo soprotivleniia. (Moscow. Universitet. Uchenye zapiski, 1937. no. 7: Mekhanika. p. 113-116)

Summary in French.

Title tr.: The problem of vortex resistance.

Q60. M868 1937, no. 7

SO. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEMYANSKIY

KOSMODEM'IANSKII, ARKADII ALEKSANDROVICH.

Nekotorye voprosy aerodinamicheskoi teorii soprotivleniia. (Moscow. Universitet. Uchenye zapiski, 1940, no. 46: Mekhanika, p. 39-83, illus., diagrs.)

Title tr.: Some problems of the aerodynamic theroy of drag.

Q60.M868 1940, no. 46

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A.

Obshchie teoremy mekhaniki tela peremennoi massy (General theorems of the mechanics of a body of variable mass), Izd. VVIV (Voenno-vozdushnoi inzhenernoi akademii imeni Zhukovskogo), Moscow, 1946, 16 pp.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A. A.

"Extremal Problems for a Point of Varying Mass," Dokl. AN SSSR, 53, No.1, 1946

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A.

Mekhanika tel peremennoi massy; teoriya reaktivnogo dvizheniya (Mechanics of bodies of variable mass; theory of reactive motion), Izd. VVIA (Voenno-vozdushnoi inzhenernio akademii imeni Zhukovskogo), Moscow, 1947, 110 pp.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

Kosmodem'yanskiy, Arkadiy Aleksandrovich

KOSMODEM'YANSKII, ARKADII ALEKSANDROVICH.

Konstantin Eduardovich TSiolkovskii, 1857-1935; stenogramma publichnoi lektsii, prochitannoi v Moskve. Moskva, Pravda, 1948. 31 p., illus., port.

Title tr.: Konstantin Eduardovich TSiolkovskii, 1857-1935; a stenographic report of a public lecture delivered in Moscow.

TL540.T84K6

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

Kosmodem'yanskiy A. A.

KOSMODEM'YANSKIY, A. A.

Ocherki po istorii teoreticheskoi mekhaniki v Rossii. (Moscow. Universitet. Uchenye zapiski, 1948, no. 122: Mekhanika, v. II, p. 193-296)

Title tr.: Historical sketches of theoretical mechanics in Russia.

Q60.M868 1948, no. 122.

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

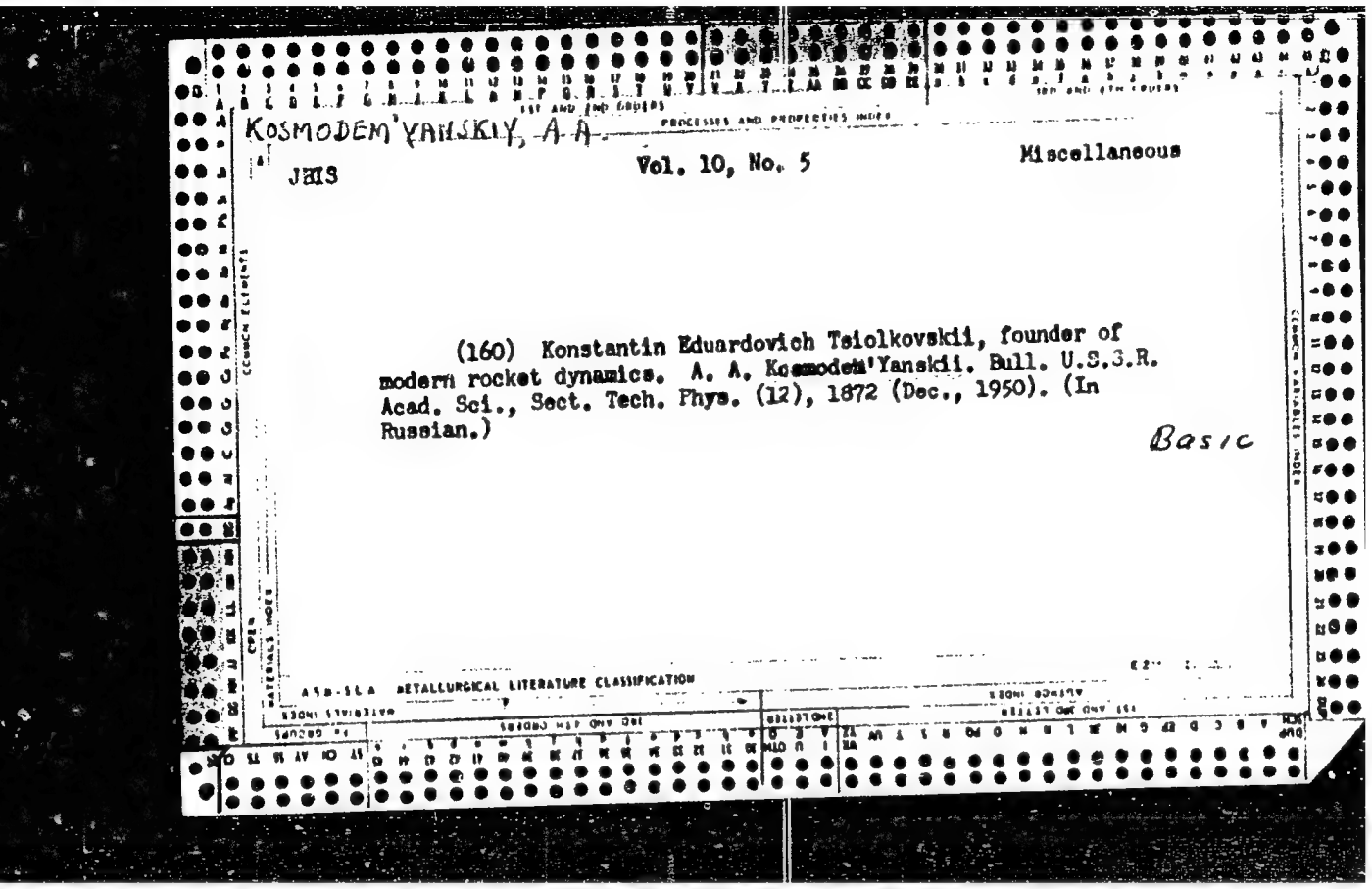
KOLCHINSKIY, A. A.

34106. Konstantin Eduardovich Tsiolkovskii-osnovopolozhnik sovremennoy raketodinamiki. Fizika v shkole, 1949, No. 5, s. 17-24, s. portr.

SO: Knizhnaya Letopis' Vol. 7, 1955

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6



KOSMODEM'YANSKIY, A. A.

JMS Vol. 10, No. 5 Miscellaneous

(160) Konstantin Eduardovich Tsiolkovskii, founder of modern rocket dynamics. A. A. Kosmodem'Yanskii. Bull. U.S.S.R. Acad. Sci., Sect. Tech. Phys. (12), 1872 (Dec., 1950). (In Russian.)

Basic

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A. A.

Mathematical Reviews
Vol. 14 No. 10
Nov. 1953
Mechanics

Kosmodem'yanskii, A. A. General theorems of the dynamics of a body of variable mass. Moskov. Gos. Univ. Ucenye Zapiski 152, Mehanika 3, 13–42 (1951). (Russian)
This paper covers the same ground as Lectures 8 and 9 of the paper reviewed below.
R. A. Rankin

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A. A.

Mathematical Reviews
Vol. 14 No. 10
Nov. 1953
Mechanics

7-14-54
LL

1/3

(3) mi

Kosmodem'yanskiĭ, A. A. Lectures on the mechanics of bodies of variable mass. Moskov. Gos. Univ. Učenye Zapiski 154, Mehanika 4, 73–180 (1951). (Russian)

These lectures are from a course which the author has given since the session 1943/44 at the Soviet academy of military and aeronautical engineering. The paper begins with a historical account of theoretical mechanics giving especial emphasis to the work of Meščerskiĭ (1859–1935) and Tsiolkovskiĭ (1857–1935) who evidently were the first to consider mathematically problems concerning bodies of variable mass. The work of Esnault-Pelterie, Goddard, Oberth, Levi-Civitâ, Tsander and Kondratjuk is mentioned, but there is no reference to more recent work done outside Russia.

First lecture. Here are derived the equations of motion of a particle (the author uses the word 'point' for the word 'particle' which he uses in a different connexion) of variable mass, including the equation

$$M\frac{dv}{dt}=F+V_r\frac{dM}{dt}, \tag{1}$$

where M is the mass of the particle, v its velocity, t the time, F the external force acting and V_r the relative velocity of the ejected part. In the case when the absolute velocity of the ejected part is zero this equation was first obtained by Meščerskiĭ [Thesis, St. Petersburg, 1897]. Equation (1) is resolved into three scalar equations for the case when F is composed of gravity and air resistance in the direction opposing motion. When these forces are neglected, the now well-known law $v=v_0+V_r \log (M_0/M)$ is deduced from (1)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

Kosmodem'yanskii 2/3

motion of a particle which is both losing mass and gaining mass is obtained; it is of similar form and was given by Meščerskiĭ [Izvestiya St.-Peterburg. Politehn. Inst. 1, no. 1-2, 77-118 (1904)]. In §2 this is applied, as an approximation, to the motion of a reaction boat which expels the same amount of water as it takes in. The motion of a uniform chain falling over the edge of a table is studied as a further example on variable mass in §3.

Fifth lecture. In §1 the rectilinear motion of an aircraft with air-jet motor is considered; it is assumed that conditions are such that the particle theory can be applied. Thus, for example, the motion of the mass-centre in the aircraft is supposed negligible, and the motion of the air inside the aircraft is ignored. Resistance is taken to be proportional to velocity. The velocity and horizontal range are calculated. In §2 rectilinear motion of a particle under gravity is treated for a general law of air resistance, it being assumed that the rate of gaining mass is a constant multiple of the rate of losing mass. The optimum form of the function $f(t)$ is found in order to give the maximum range. In §3 the similar problem of finding the optimum $f(t)$ such that a given distance is traversed in a minimum time is discussed. In both cases $f(t)$ is obtained, in the first place, as a function of the velocity.

Sixth lecture. This deals with the converse problem where from known external forces and motion the law of burning is to be determined. In §1 such a problem due to Meščerskiĭ (1897) is considered; it is assumed that s and v are known as functions of t, also $g=g(s)$ and the inclination θ of the trajectory (assumed constant). With these conditions $f(t)$ and attributed to Tsiolkovskiĭ (1903). The 'burning laws' (i) $f(t)=M/M_0=1-\alpha t$, (ii) $f(t)=e^{-\alpha t}$ are investigated in detail.

Second lecture. The vertical movement of a particle of variable mass with the second burning law, under a uniform field of gravity and without air resistance, is considered; the maximum height H attainable, for given α, V, and final mass M_1, is obtained. It is deduced that H is greatest when $\alpha=\infty$, i.e., when the mass is reduced from M_0 to M_1 instantaneously. The maximum height attainable at the instant of 'all-burnt' is also obtained. Rectilinear motion without gravity with the first burning law and a resistance proportional to the square of the velocity is also considered.

Third lecture. In §1 the motion under a resistance of the form $a+bv$ is considered for the first burning law. In §2 the author considers a jet aircraft moving horizontally against air resistance so that the lift just compensates the weight. The application of the particle theory to this problem is, of course, only possible as an approximation. The distance traveled during the period when the jet is acting is calculated, for the first burning law, and the optimum value of α is obtained. In §3 vertical motion under uniform gravity subject to air resistance proportional to the velocity is considered. In §4 the problem is of vertical motion away from the surface of the earth under varying gravity; air resistance is neglected and the maximum velocity attained is sufficiently small so that the distance moved from the surface is small in comparison with the earth's radius. These assumptions permit simplifying approximations to be used when calculating the distance traveled.

Fourth lecture. In §1 the general vectorial equation of

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEMIYANSKIY, A.A.

KOSMODEMI'YANSKIY, A. A.

Nikolai Egorovich Zhukovskii - otets russkoi aviatsii /Nikolai Egorovich Zhukovskii, father of Russian aviation/. Moskva, Voenizdat, 1952. 136 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 5, August 1953

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A.

K.E.TSiolkovskii, founder of modern rocket dynamics. Trudy po ist.tekh. no.1:20-34 '52. (MLRA 6:7)
(TSiolkovskii, Konstantin Eduardovich, 1857-1935)
(Rockets (Aeronautics))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY,A.A., professor

N.E.Zhukovskii's theorem on the lift force of airplane wings.
Kryl. rod. 3 no.1:20-21 Ja '52. (MLRA 8:8)

1. Chlen-korrespondent Akademii artilleriyskikh nauk
(Zhukovskii, Nikolai Egorovich) (Lift (Aeronautics))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

LYAPUNOV, B.V., inzhener; KADER, Ya.M., redaktor; KOSMODEM'YANSKIY, A.A., doktor fiziko-matematicheskikh nauk, professor, inzhener-polkovnik, konsul'tant; TIKHONRAVOV, M.K., inzhener-polkovnik, kandidat tekhnicheskikh nauk, konsul'tant; SRIBNIS, M.V., tekhnicheskiy redaktor.

[Rocket; rocket technology and jet propulsion] Raketa; raketnaia tekhnika i reaktivnaia aviatsiia. Moskva, Voennoe izd-vo Ministerstva oborony SSSR, 1954. 127 p. [Microfilm] (MLRA 7:11)
(Rockets (Aeronautics))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A., doktor fiziko-matematicheskikh nauk, professor; KADER, Ya.M., redaktor; SOKOLOVA, G.F., tekhnicheskiy redaktor.

[K.E.TSiolkovskii, outstanding scientist] Znamenityi deiatel' nauki K.E.TSiolkovskii. 2-e, ispr. i dop. izd. Moskva, Voennoe izd-vo Ministerstva oborony SSSR, 1954. 133 p. (MLRA 7:11)
(TSiolkovskii, Konstantin Eduardovich, 1857-1935)
(Rockets (Aeronautics))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A.

TSIOLKOVSKIY, Konstantin Eduardovich; BLAGONRAVOV, A.A., akademik, redaktor; VOROB'YEV, B.N., inzhener, redaktor; KOSMODEM'YANSKIY, A.A., doktor fiziko-matematicheskikh nauk, nauchnyy redaktor; BEKASOVA, L.M., redaktor; ZEMLYAKOVA, T.A., tekhnicheskiy redaktor

[Collected works] Sobranie sochinenii. Moskva, Izd-vo Akademii nauk SSSR. Vol. 2. [Jet propulsion flying machines] Reaktivnye letatel'nye apparaty. 1954. 453 p. (MLRA 8:4)
(Jet propulsion) (Rockets (Aeronautics))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, Arkadiy Aleksandrovich, professor Moskovskogo universiteta; GLIKI,L.V., redaktor; MAKHOVA,N.N., tekhnicheskiy redaktor.

[Course in theoretical mechanics for departments of physics and mathematics in pedagogical institutes] Kurs teoreticheskoi mekhaniki; dlia fiziko-matematicheskikh fakul'tetov pedagogicheskikh vuzov. Izd.2-oe, dop. i ispr. Moskva, Gos.uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 655 p.
(Mechanics) (MIRA 9:3)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A., professor, doktor fiziko-matematicheskikh nauk

Konstantin Eduardovich TSiolkovskii. Nauka i zhizn' 22 no.9:53-55 S '55. (MLRA 8:12)
(TSiolkovskii, Konstantin Eduardovich, 1857-1953)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.

85-8-12/18

AUTHOR: Kosmodem'yanskiy, A., Professor

TITLE: K. E. Tsiolkovskiy (Konstantin Eduardovich Tsiolkovskiy). On the Occasion of the 100th Anniversary of his Birth (K 100-letiyu so dnya rozhdeniya)

PERIODICAL: Kryl'ya Rodiny, 1957, Nr 8, pp. 22-23 (USSR)

ABSTRACT: The article is a first installment of a popularly written biography of K. E Tsiolkovskiy. The second and last installment will appear in the next issue of the Kryl'ya Rodiny. The author of the article lays stress on the scientific achievements of the eminent Russian scientist, apparently seeking to present him as the one who has paved the way for the recent successes in the field of applied sciences. Below are summarized the more important assertions made in the article: (a) The main scientific works of Tsiolkovskiy deal with three technological problems: the problem of directing the flight of rigid lighter-than-the-air airships with all-metal body; the problem of the form to be given to the heavier-than-the air aircraft; and the problem of using jet propulsion

Card 1/5

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

for interplanetary flights. It is that the bulk of Tsiolkovskiy's work related to the theory of flight of dirigibles was done between the years 1885 and 1892; that principal articles dealing with the building of heavier-than-the-air ships were published in 1894; and that Tsiolkovskiy began a systematic study of the theoretical aspects of the motion of the rockets as early as 1896. (b) The problem of flight of the lighter-than-the-air rigid airships is discussed in Tsiolkovskiy's work entitled "The Theory on Airships and its Practical Application" (Teoriya i Opyt Aerostata). Tsiolkovskiy is said to have been "the first to indicate what geometric form shall be given to the airship, and to calculate the required structural strength of the thin metallic sheath." The airship Tsiolokvskiy deals with is an air ship "of varying volume, and therefore independent, in regard to its liftpower, of any possible changes in the temperatures of the surrounding air and in the altitudes of the flight". The exact date of the publication of this Tsiolkovskiy's work is not given. (c) with respect to the theory of flight of heavier-than-the-air airships, it is asserted that Tsiolkovskiy was the first to set forth the idea of an all-metal airplane. In an article published in 1894 under the title

Card 2/5

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.

85-9-15/33

AUTHOR: Kosmodem'yanskiy A., Professor

TITLE: K.Ye. Tsiolkovskiy (Konstantin Eduardovich Tsiolkovskiy). On the occasion of the 100th anniversary of his birth (k 100-letiyu so dnya rozhdeniya)

PERIODICAL: Kryl'ya Rodiny 1957, Nr 9, pp. 14-16 (USSR)

ABSTRACT: The article is the 2nd and last installment of a popularly written biography of K.Ye. Tsiolkovskiy. The first installment appeared in Nr 8, 1957, of the Kryl'ya Rodiny. The author of the biography is chiefly concerned with the scientific achievements of the Russian scientist. In the part of the 2nd installment given to the outline of Tsiolkovskiy's achievements in the study of the influence of the force of gravity and of the drag on the flight of a rocket, Prof. Kosmodem'yanskiy indicates that Tsiolkovskiy's calculations concerning the optimum distribution in time of the thrust produced by a reactive engine in a vertical flight form the basis of a series of subsequent Soviet studies. In that connection he quotes his own, Kosmodem'yanskiy's, formula correlating the weight of the rocket and the force of resistance of the atmosphere:

Card 1/4

$$P = Q\left(1 + \frac{v}{V_r}\right)$$

85-9-15/33

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

K.Ye. Tsiolkovskiy. On the occasion of the 100th anniversary of his birth (Cont.)

where P - the weight of the rocket; Q - the force of resistance of the atmosphere; v - the velocity of the rocket; and V_r - the relative velocity of the ejected particles. The formula applies when the law governing the drag is quadratic. In describing K.Ye. Tsiolkovskiy's work in the field of rocket dynamics (both the purely scientific work and the work concerning the solution of practical technological problems), Prof. Kosmodem'yanskiy notes that Tsiolkovskiy's studies permitted to establish that the coefficient of efficiency of a reactive engine will approach 1 when the relative velocity of the ejected particles equals the velocity of the rocket itself, and indicates that the present relative velocity of the ejected particles is that of 1800 to 2500 m per second. With respect to Tsiolkovskiy's studies in the domain of fuel for rockets, the author of the article credits him with having formulated the basic requirements which these fuels must satisfy. Noteworthy among these 6 requirements - which are supposed to govern up to now the research - may be the 5th: the fuel "Must be liquid

Card 2/4

[illegible] is said to [illegible] a given total weight, such weights [illegible] component parts that would ensure the maximum velocity of the last part, i.e. of the part carrying the useful load. Prof. Kosmodem'yanskiy indicates on that occasion that the construction of a rationally built" train of rockets" is now one of the actual problems of

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

85-9-15/33

K.E. Tsiolkovskiy. On the occasion of the 100th anniversary of his birth (Cont.)

Kosmodem'yanskiy calls him the founder of that theory and lists the following ideas Tsiolkovskiy was assertedly the one to bring forth: the idea of using jet streams for steering the rockets; the idea of using gyroscopes for stabilizing the rockets traveling through gravity-less areas; and the idea of using the components of the fuel for cooling the exhaust nozzle. The author mentions also Tsiolkovskiy's idea of avoiding the burning out of the rockets returning to the Earth, by making them glide along inclined paths and by cooling them with a liquid oxidizer. Moreover, Tsiolkovskiy is said to have scientifically proven the theoretical possibility of traveling through space at cosmic speeds. The greatness of Tsiolovskiy as scientist Prof. Kosmodem'yanskiy sees in that Tsiolkovskiy has correctly foreseen the lines of future developments in the field of science his contemporaries could not perceive. 2 photos

AVAILABLE: Library of Congress

Card 4/4

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A.

AUTHOR: Kosmodem'yanskiy, A.A., Professor 26-10-9/44

TITLE: An Eminent Pioneer of Science (Vydayushchiysya uchenyy-novator)

PERIODICAL: Priroda, October 1957, No 10, pp 73-78 (USSR)

ABSTRACT: The article deals with the life of K.E. Tsiolkovskiy, an eminent Russian scientist who was born on September 17, 1857. He was the initiator of the scientific theory on interplanetary travel and had made several outstanding discoveries in aerodynamics, rocket dynamics, geophysics and the theory of aviation. As early as 1929 he suggested the construction of multistage rockets or entire rocket trains on principles that are applied in modern artificial satellites. Tsiolkovskiy published a number of articles which dealt with 3 main problems: the construction of all-metal dirigibles, airplanes and rockets for interplanetary communication. He suggested various kinds of fuel for propelling rockets and figured out the quantities of fuel needed for the return trip to earth. Tsiolkovskiy earned recognition only after the Communist regime had taken over, when he was granted the means to publish the results of scientific research he had been conducting for years in miserable circumstances.

Card 1/2 The article contains one photo. The bibliography lists one

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

Kosmodem'yanskiy, A. A.

AUTHOR: Kosmodem'yanskiy, A.A., Professor, Doctor of Physico-Mathematical Sciences 3-58-4-6/34

TITLE: Introduce the New, the Progressive in the Education in General-Scientific and General-Technical Disciplines (Novoye, progressivnoye - v prepodavaniye obshchenauchnykh i obshchetekhnicheskikh distsiplin). Answer Questions Put Forward By Life (Otvechat' na voprosy, vydvigayemyye zhizn'yu)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, # 4, pp 20 - 26 (USSR)

ABSTRACT: In the article, the author sets forth his views on the methods of instructing theoretical mechanics at higher technical schools with regard to the great achievements of our time in science and technics.

He enumerates these achievements, stating that the center of gravity of scientific searchings in theoretical mechanics has been shifted to the dynamical problems.

The new scientific subjects connected with rocket technique and nuclear power engineering call for a critical revision of scientific problems, even in such a classical subject as theoretical mechanics. The new demands, put forward by life itself, are not being reflected in lectures on theoretical mechanics, because of the small number of hours allotted to mechanics. In

Card 1/ 3

[illegible] Engineering Academy imeni Zhukovskiy)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

Introduce the New, the Progressive in the Education in General-Scientific and General-Technical Disciplines 3-58-4-6/34

uses the following schedule of hours in the course in mechanics: second semester (16 weeks) 2 hours of lectures and 2 hours of practical exercises per week (for geometrical statics and the principle of possible permutations); third semester (16 weeks) 3 hours for lectures and 3 hours of practical exercises weekly (for the study of kinematics and the dynamics of the point); fourth semester(16 weeks) 3 hours weekly for lectures and 2 hours of practical exercises (for the study of the dynamics of system and solids as well as special chapters of dynamics). The author recommends that 128 hours of lectures and 112 of practical exercises, as in the above example, be allotted to the entire course. He divides the course into 4 sections: Statics, Kinematics, Dynamics of the Point, Dynamics of the System and Special Questions of Dynamics, giving the number of hours for each.

In conclusion, he affirms that a full course in theoretical mechanics is also required for electrical-engineers and radio operators.

There are 3 Soviet and 1 English reference.

AVAILABLE: Library of Congress

Card 3/3

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

PHASE I BOOK EXPLOITATION SOV/4399

Kosmodem'yanskiy, Arkadiy Aleksandrovich, Doctor of Physics and Mathematics, Professor

K.E. Tsiolkovskiy -- yego zhizn' i raboty po raketnoy tekhnike (K.E. Tsiolkovskiy, His Life and Work in Rocket Engineering) Moscow, Voyenizdat M-va obor. SSSR, 1960. 190 p. (Series: Nauchno-populyarnaya biblioteka) No. of copies printed not given.

Ed.: Ya.M. Kader; Tech. Ed.: Ye.K. Konovalova.

PURPOSE: This book is intended for the general reader.

COVERAGE: The book describes Tsiolkovskiy's scientific work in astronautics and in the theory of rocket propulsion. The first three Soviet artificial satellites are discussed. The TU-114 airliner is mentioned and shown in a photograph. The history of Soviet rocketry is sketched. The Soviet MR-1 meteorologic rocket used during the International Geophysical Year is described. No personalities are mentioned. There are no references.

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

BLAGONRAVOV, A.A., akademik, red.; GRIGOR'YAN, A.T., doktor fiz.-mat. nauk, red.; DUSHKIN, L.S., doktor tekhn. nauk, red.; KOSMODEM'YANSKIY, A.A., doktor fiz.-mat. nauk, red.; KOZLOV, S.G., prof., red.[deceased]; SOKOLOVA, S.A., kandd. tekhn. nauk, red.; SOKOL'SKIY, V.N., kand. tekhn.nauk, red; FEDOROV, A.S., kand. tekhn. nauk, red.; CHEKANOV, A.A., kand. tekhn. nauk, red.; SHUKHARDIN,S.V., kand. tekhn. nauk, red.

[From the history of rocket engineering] Iz istorii raketnoi tekhniki. Moskva, Nauka, 1964. 254 p. (MIRA 17:8)

1. Akademiya nauk SSSR. Institut istorii yestestvoznaniya i tekhniki.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

TSIOLKOVSKIY, K.E.; VOROB'YEV, B.N., inzh.; SOKOL'SKIY, V.N.;
KOSMODEM'YANSKIY, A.A., doktor fiz.-mat. nauk, otv. red.;
KUDRYAVTSEVA, L.V., red.izd-va; POLYAKOVA, T.V., tekhn.red.

[Jet aircraft] Reaktivnye letatel'nye apparaty. Moskva, Izd-vo "Nauka," 1964. 473 p. (MIRA 17:3)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A.

Variational problems of the dynamics of orbital airplanes.
Vest. Mosk. un. Ser. 1: Mat., mekh. 18 no.4:70-76 Jl-Ag '63.
(MIRA 16:8)

1. Kafedra teoreticheskoy mekhaniki.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 61736-65 EWT(d)/EWT(l)/EWT(m)/EWT(m)/FS(v)-3/FA/EWG(v)/EWA(d)/EWP(h) Pe-5/Pg-4/
ACCESSION NR: AP5019914 Po-4/Pq-4 GW UR/0055/65/000/004/0067/0077
533.665:519.3

53
52
B

AUTHOR: Kosmodem'yanskiy, A. A.

TITLE: On the maximum duration of horizontal flight of a rocket-powered aircraft

SOURCE: Moscow. Universitet. Vestnik. Seriya 1. Matematika, mekhanika, no. 4, 1965, 67-77

TOPIC TAGS: rocket aircraft, flight mechanics, powered flight, flight path, time optimal control, trajectory optimization, rocket thrust, lift drag ratio, aerodynamics, thrust control

ABSTRACT: The dynamics of horizontal flight of a rocket-powered aircraft in a gravitational field are analyzed, with the effect of varying mass taken into account. An empirical method based on the calculus of variations is outlined for the solution of differential nonlinear equations of motion of the center of mass. Expressions are established for the time of flight and distance traveled during powered flight. The optimum law of variation of mass is established for which the powered flight time is maximum. The optimum thrust program is determined by an exponential function and depends only on lift-drag ratio of the aircraft. It was ascertained that the

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 61736-65 EWT(d)/EWT(l)/EWP(m)/EWT(m)/FS(v)-3/FA/EWG(v)/EWA(d)/EWP(h) Pe-5/Pq-4/
ACCESSION NR: AP5019914 Po-4/Pq-4 GH UR/0055/65/000/004/0067/0077
533.665:519.3

53
52
B

AUTHOR: Kosmodem'yanskiy, A. A.

TITLE: On the maximum duration of horizontal flight of a rocket-powered aircraft

SOURCE: Moscow. Universitet. Vestnik. Seriya 1. Matematika, mekhanika, no. 4, 1965, 67-77

TOPIC TAGS: rocket aircraft, flight mechanics, powered flight, flight path, time optimal control, trajectory optimization, rocket thrust, lift drag ratio, aerodynamics, thrust control

ABSTRACT: The dynamics of horizontal flight of a rocket-powered aircraft in a gravitational field are analyzed, with the effect of varying mass taken into account. An empirical method based on the calculus of variations is outlined for the solution of differential nonlinear equations of motion of the center of mass. Expressions are established for the time of flight and distance traveled during powered flight. The optimum law of variation of mass is established for which the powered flight time is maximum. The optimum thrust program is determined by an exponential function and depends only on lift-drag ratio of the aircraft. It was ascertained that the

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 61736-65

ACCESSION NR: AP5019914

optimum motion is a retarded motion which decreases the value of thrust required for horizontal flight. The influence of basic parameters of the aircraft and rocket motor on the optimum flight regime is investigated. Orig. art. has: 5 figures and 44 formulas. [AB]

ASSOCIATION: Kafedra teoreticheskoy mekhaniki Moskovskiy gosudarstvennyy universitet (Department of Theoretical Mechanics, Moscow State University)

SUBMITTED: 03Jul64 ENCL: 00 SUB CODE: ME

NO REF SOV: 002 OTHER: 000 ATD PRESS: 4061

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 3941-66 EWT(d)/EWT(m)/EWP(w)/T-2/EWP(k)/EWA(h)/ETC(m) EM/WW

ACC NR: AP5023985 UR/0055/65/000/005/0052/0060

533.69

AUTHOR: Kosmodem'yanskiy, A. A.

TITLE: Determining the lift of an airfoil at an instantaneous change in angle of attack

SOURCE: Moscow. Universitet. Vestnik. Seriya I. Matematika, mekhanika, no. 5, 1965, 52-60

TOPIC TAGS: airfoil lift, trailing edge vortex, trailing vortex circulation, lift curve slope, angle of attack change

ABSTRACT: Formulas for the lift coefficient C_y of an airfoil and its increase $dC_y/d\alpha$ caused by a sudden change in the angle of attack α are derived by using the following model of lift generation in a plane-parallel flow: At the instant $t = 0$, when α assumes instantaneously a new value $\alpha_1 > \alpha$, an initial Prandtl vortex leaves the sharp trailing edge of the airfoil. The circulation of this vortex increases with distance from the trailing edge, and at any instant $t > 0$, the circulation must have such a value that the Zhukovskiy hypothesis (about the finite velocities at the points where the airstream leaves the trailing edge) will be fulfilled. The axis of this trailing-edge vortex can be visualized as a small-radius cylinder on which the boundary layer leaving the airfoil surface is wrapped, thus gradually increasing the cir-

Card 1/2

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A.

Maximum duration of the horizontal flight of a jet-propelled airplane. Vest. Mosk. un. Ser. 1: Mat., mekh. 20 no.4:67-77 Jl-Ag '65. (MIRA 18:9)

1. Kafedra teoreticheskoy mekhaniki Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, A.A.

Determining the lifting force of a wing profile in the case of instantaneous changes in the angle of attack. Vest. Mosk. un. Ser. 1: Mat., mekh. 20 no.5:52-60 S-O '65. (MIRA 18:9)

1. Kafedra teoreticheskoy mekhaniki Moskovskogo universiteta.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEMYANSKIY, Arkadiy Aleksandrovich; MIKHALKEVICH, T.V., red.

[Course in theoretical mechanics] Kurs teoreticheskoi mekhaniki. Moskva, Prosveshchenie. Pt.1. 1965. 537 p.
(MIRA 18:10)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

S/258/62/002/003/008/008
I006/I206

AUTHOR: Kosmodomianskiy, A.S. (Saratov)

TITLE: On state of strain of anisotropic plate with two infinite rows of elliptic cutouts

PERIODICAL: Inzhenernyy zhurnal, v.2, no.3, 1962, 109-118

TEXT: The paper is an extension of the work of Vorovich and Kosmodamianskiy (Mohanika i Mashinostroyenie, No.4, 1959) and of Sherman (Inzhenernyy sbornik, v.31, 1961) on strain in isotropic plate with one infinite row of curvilinear cutouts, to include the case of the non isotropic plate with two parallel rows of elliptic cutouts. There are 1 figure and 7 tables.

SUBMITTED: February 25, 1962

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 7879-66 EWT(m)/EPF(c)/EWP(j)/T RPL RM

ACC NR: AP5025030 SOURCE CODE: UR/0286/65/000/016/0083/0083

AUTHORS: Belyayev, V. A.; Gromova, V. A.; Zemit, S. V.; Kavrayskaya, N. L.; Kopylov, Ye. P.; Kosmodem'yanskiy, L. V.; Kostin, D. L.; Kut'in, A. M.; Lazaryants, E. O.; Romanova, E. G.; Tsaylingol'd, V. L.; Shikhalova, K. P.; Shushkina, Ye. N.

ORG: none

TITLE: Method for obtaining synthetic rubber. Class 39, No. 173942

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 83

TOPIC TAGS: rubber, synthetic rubber, butadiene, styrene, polymer, copolymer, polymerization

ABSTRACT: This Author Certificate presents a method for obtaining synthetic rubber by polymerization or copolymerization of dienes with vinyl monomers, for example, butadiene with α-methylstyrene, in aqueous emulsion at low temperatures in the presence of known free-radical-initiators and regulators employing emulsifiers. To improve the polymer properties, esters of monoalkylbenzoic acid are used as emulsifiers.

SUB CODE: 11,07/ SUBM DATE: 03Jul63

Card 1/1 nw UDC: 678.762 678.762-134

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, L.V.; FARBEROV, M.I.; LAZARYANTS, E.G.; SHUSHKINA, Ye.N.; ROMANOVA, R.G.

Effect of the colloid-chemical characteristics of soaps on the polymerization kinetics and properties of latex. Koll. zhur. 27 no.6:833-838 N-D '65. (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka, Yaroslavl'. Submitted June 30, 1964.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

RUMYANTSEVA, Z.M.; GOLITSINA, A.A.; FARBEROV, M.A.; EPSHTEYN, V.G.; LAZARYANTS, E.G.; YEMEL'YANOV, D.P.; KOSMODEM'YANSKIY, L.V.

Synthesis and use of butadiene-methacroleinic latexes. Kauch. i rez. 23 no.7:7-10 Jl '64. (MIRA 17:8)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka, Yaroslavskiy tekhnologicheskiy institut i Yaroslavskiy shinnyy zavod.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 34518-66 EWP(j) IJP(c) RM

ACC NR: AP6010546 (A) SOURCE CODE: UR/0069/65/027/006/0833/0838

AUTHOR: Kosmodem'yanskiy, L. V.; Farberov, M. I.; Lazaryants, E. G.; Shushkina, Ye. N.; Romanova, R. G.

ORG: Scientific Research Institute of Monomers for Synthetic Rubber, Yaroslavl' (Nauchno-issledovatel'skiy institut dlya sinteticheskogo kauchuka)

TITLE: Effect of the colloidal-chemical characteristics of soaps on the polymerization kinetics and properties of latex

SOURCE: Kolloidnyy zhurnal, v. 27, no. 6, 1965, 833-838

TOPIC TAGS: particle size, polymerization kinetics, soap, emulsion polymerization

ABSTRACT: The colloidal-chemical characteristics of potassium salts (soaps) of di-tert-butylbenzoic acid (DTBBA) and their relation to the kinetics of emulsion polymerization were studied by carrying out the emulsion copolymerization of bivinyl and α-methylstyrene with these soaps and their mixtures. The soaps were found to have a low solubilizing capacity and a high value of the critical concentration of micelle formation (CCMF) as compared to soaps of disproportionated rosin and synthetic fatty acids. The rate of emulsion polymerization is determined primarily by the quantity and nature of the micellar soap present in the system. The quantity of the micellar soap in the mixture undergoing polymerization determines the character of the change

Card 1/2 UDC: 541.18:542.952/954

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 34418-66

ACC NR: AP6010546

in the surface tension of the latex and its magnitude. In latexes obtained from soaps with high CCMF the particle size is higher than in latexes of low CCMF. This is attributed to the fact that soaps of high CCMF have emulsifying properties in the presence of micelles, and after the latter disappear, the soaps have the properties of electrolytes, which promote the formation of larger latex particles. It is concluded that the CCMF value of soaps has a definite influence on the particle size of the latex particles, and that the fractional composition of the soaps influences the particle size distribution. Orig. art. has: 6 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 30Jun64/ ORIG REF: 008/ OTH REF: 009

Card 2/2 BLG

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, V.A. (Moskva)

Design of stage rockets. Inzh. zhur. 4 no.2:219-224 '64
(MIRA 17:8)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 44339-65 EWT(d) Pg-4 IJP(c)

ACCESSION NR: AP5010636 UR/0040/65/029/002/0368/0372

AUTHOR: Kosmodem'yanskiy, V. A. (Moscow)

TITLE: Necessary conditions of calculus of variations for Bolts-Meyer type problem

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 2, 1965, 368-372

TOPIC TAGS: differential equation, optimal control, calculus of variations

ABSTRACT: Consider

$$\dot{x}_i = x_i' = f_i(x_1, \ldots, x_n, u_1, \ldots, u_m, t) = 0 \quad (i = 1, \ldots, n) \qquad (1)$$

which is a system of n first order ordinary differential equations describing a dynamic process, together with a system

$$\Psi_k = \Psi_k(x_1, \ldots, x_n, t) = 0 \ (k = 1, \ldots, r < n) \qquad (2)$$

of r dependencies. Here $u_j(t, t_1)$ are control functions having discontinuities of the first kind at times t_1. It is assumed that the coordinates of the system satisfy p end point conditions (t_0 and T are not fixed),

$$\varphi_l = \varphi_l[x_1(t_0), \ldots, x_n(t_0), t_0, x_1(T), \ldots, x_n(T), T] = 0 \quad (l = 1, \ldots, p < 2n + 1). \qquad (3)$$

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 48339-65
ACCESSION NR: AP5010636

The author determines the times t_1 whose choice gives the functional

$$J = g(t_0, x(t_0), T, x(T)) + \int_{t_0}^{T} f(t, x, \dot{x})\,dt \qquad (4)$$

an extremum. In various sections he justifies the applicability of several necessary conditions from Calculus of Variations (multiplier law, Weierstrass conditions, Klebsh conditions, and Jacoby conditions) to problems of the given type. As an illustration he presents an elementary example of rectilinear motion of a tro-stage rocket in a homogeneous, resistanceless, gravitational field. Orig. art. has: 22 formulas.

ASSOCIATION: none

SUBMITTED: 09Apr64 ENCL: 00 SUB CODE: MA

NO REF SOV: 002 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 43662-66 EWT(d)/EWT(l)/EWP(m) IJP(c) GW

ACC NR: AP6022530 SOURCE CODE: UR/0040/66/030/003/0599/0604

69
B
16

AUTHOR: Kosmodem'yanskiy, V. A. (Moscow)

ORG: none

TITLE: Sufficient conditions for an absolute extremum in one variational problem of the Boltz-Mayer type

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 3, 1966, 599-604

TOPIC TAGS: variational problem, rocket flight, rocket engine

ABSTRACT: Sufficient conditions for an absolute minimum in a variational problem of the Boltz-Mayer type are proposed. The source of the class of problems examined here is that certain functions depend parametrically in a well known way on time and the position of a discontinuity of the first kind. In the references it is shown that the problem posed here is a problem of variational calculus and with the aid of the classical understanding of variations, necessary conditions for extrema of a functional are derived. Application of the principle of optimality makes it possible to establish the existence of certain non trivial curves on which the absolute extremum of the given functional is reached. For example, the problem of a multiple stage rocket is considered. The formula obtained is a generalization of the Tsiolkovsky formula for the case of arbitrary motion of a continuous rocket. Related to the problem under

17

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 43662-66

ACC NR: AP6022530

study is the well known problem of the dynamics of the flight against a programmed force of a jet engine assuming that the work of the engine takes place in the regime of maximum force and duration. In this case an absolute extremum of the functional is reached on a curve obtained through sliding regimes. Orig. art. has: 3 figures, 22 formulas.

SUB CODE: 16,12,01/ SUBM DATE: 09Apr65/ ORIG REF: 005

Card 2/2 JS

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F., kand.med.nauk

Poison in your pocket. Kryl. rod. 16 no.12:30 D '65.
(MIRA 18:12)

Card 1/2 qualities. Accuracy in orienting the ship by angular coordinates was
UDC: none

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

ACC NR: AN7004823

reduced 1.5—2 times during experiments with a prolonged (up to 12 days) stay in a spaceship mockup. The time of information transfer increased 10% by the end of the experiment. Other changes in psychophysiological functions were observed. The need for further study of work capacity and development of optimal work-rest systems for cosmonauts during long flights is indicated.
[SW]

SUB CODE: 06/ SUBM DATE: none/ ATD PRESS: 5115

Card 2/2

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

GUROVSKIY, N.N.; KOSMOLINSKIY, P.P.

Problem of periodic secretion of the gastrointestinal system in dogs. Fiziol. zh. SSSR 39 no.4:451-455 July-Aug 1953. (CIML 25:1)

1. Central Institute for the Advanced Training of Physicians, Moscow.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F. P.

Kosmolinskiy, F. P. "The effect of certain water-soluble vitamins on the resistance of the organism to oxygen insufficiency (experimental investigation)." Military Faculty, Central Inst for the Advanced Training of Physicians. Chair of Aviation Medicine. Moscow, 1955. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya letopis', No. 27, 1956. Moscow. Pages 94-109; 111.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, E.P., podpolkovnik meditsinskoy sluzhby, kandidat meditsinskikh nauk; PODOL'SKIY, I.B., mayor meditsinskoy sluzhby

Effect of hyperventilation on increasing flying personnel's ability to work. Voen.-med. zhur. no.5:72-73 My '56. (MLRA 9:9)
(OXYGEN--PHYSIOLOGICAL EFFECT)
(AVIATION MEDICINE)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

Kosmolinskiy, F. P.

U.S.S.R. / Human and Animal Physiology. Metabolism. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 21864.

Author : ~~Kosmolinski F. P.~~
Inst : Not given.
Title : The Effect of Thiamine on the Processes of Tissue Respiration Under Conditions of Anoxia.

Orig Pub: Vopr. Pitaniya 1956, No 5, 73-75.

Abstract: Determination was made of O_2 requirement (Q.02) of tissues of rats and the activity of succindehydrase (I), and cytochrome oxydase (II) by introduction of thiamine (III), (1 mg/100 gm of weight), following elevation of the animals in an altitude chamber to 10.000m. In the controls (without elevation) the Q02 of kidney tissue averaged (in MM3/1mg of dry residue) 9.95; of the liver 5.3; of the brain 4.23. Follow-

Card 1/2 10

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

AID P - 5303

Subject : USSR/Aeronautics - Aeromedicine

Card 1/1 Pub. 58 - 10/13

Author : Kosmolinskiy, F., Candidate of Medical Sciences

Title : Vitamines as an element of pilot's diet

Periodical : Kryl. rod., 10, 19, 0 1956

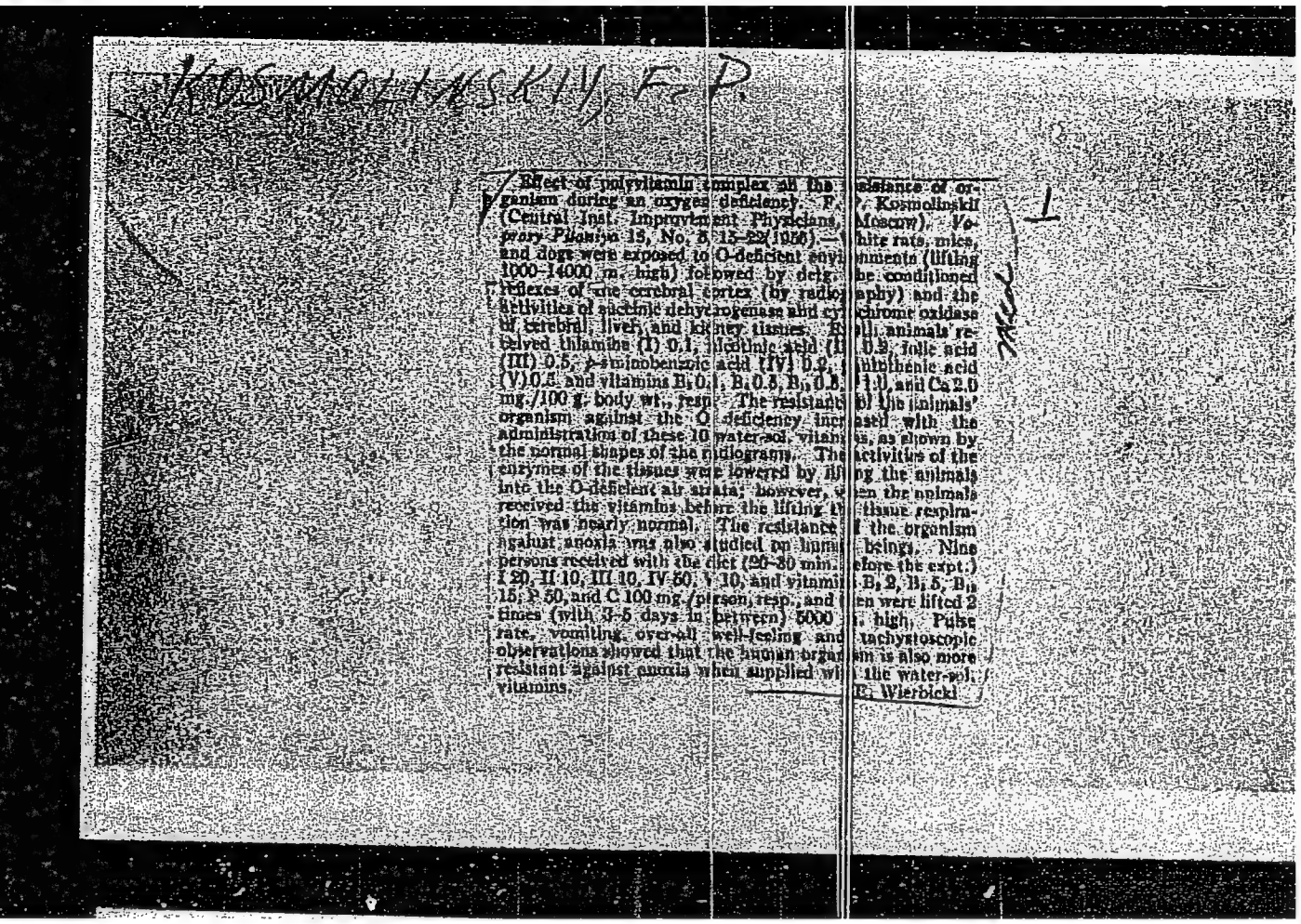
Abstract : A sketchy description of the influence of various types of vitamines on the functioning of human organism.

Institution : None

Submitted : No date

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F. P.

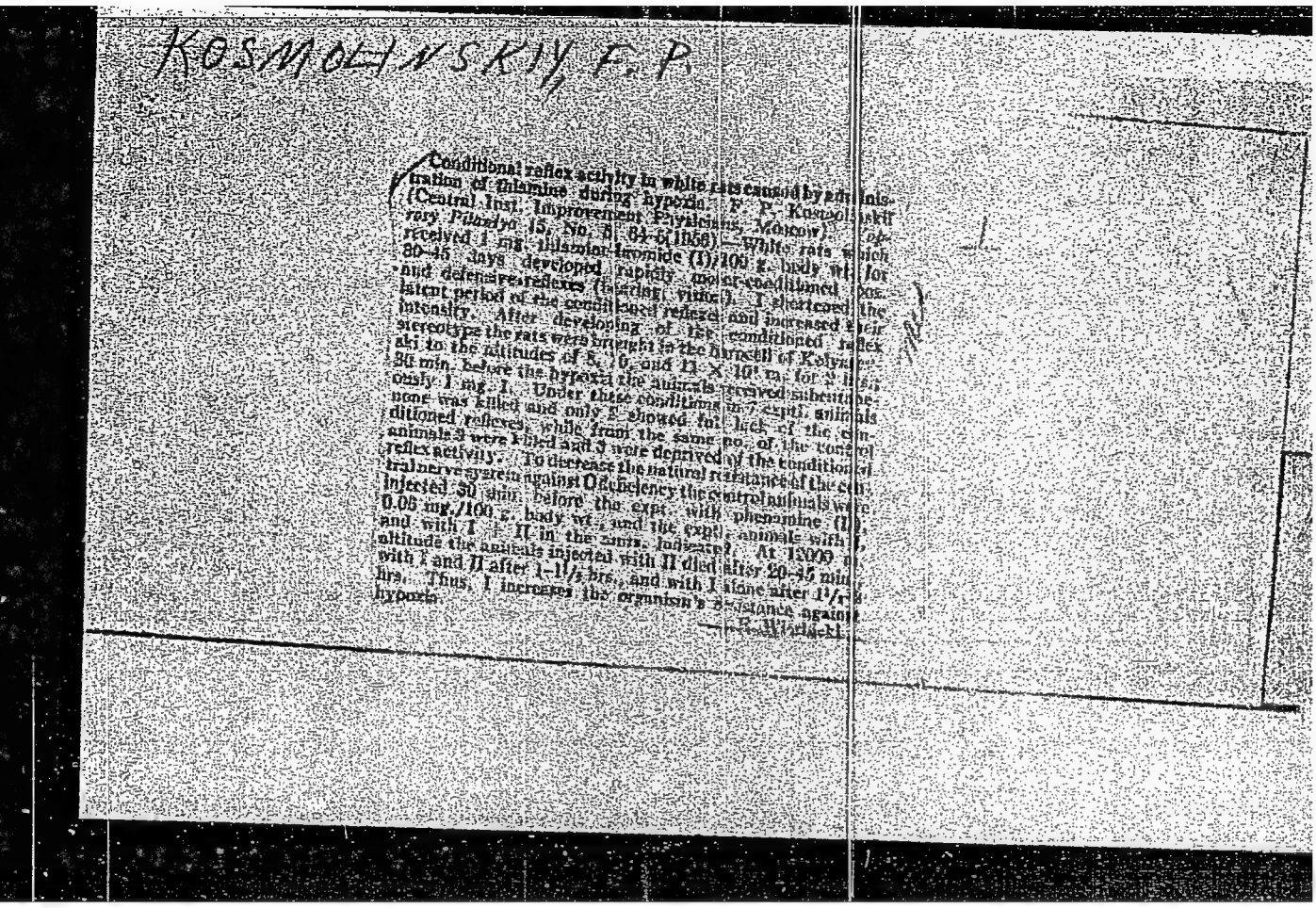


Effect of polyvitamin complex on the resistance of organism during an oxygen deficiency. F. P. Kosmolinskii (Central Inst. Improvement Physicians, Moscow). *Voprosy Pitaniya* 15, No. 5, 15-22(1956).—White rats, mice, and dogs were exposed to O-deficient environments (lifting 1000-14000 m. high) followed by detg. the conditioned reflexes of the cerebral cortex (by radiography) and the activities of succinic dehydrogenase and cytochrome oxidase of cerebral, liver, and kidney tissues. Both animals received thiamine (I) 0.1, nicotinic acid (II) 0.2, folic acid (III) 0.5, *p*-aminobenzoic acid (IV) 0.2, pantothenic acid (V) 0.5, and vitamins B_2 0.1, B_6 0.5, B_{12} 0.5, P 1.0, and Ca 2.0 mg./100 g. body wt., resp. The resistance of the animals' organism against the O deficiency increased with the administration of these 10 water-sol. vitamins, as shown by the normal shapes of the radiograms. The activities of the enzymes of the tissues were lowered by lifting the animals into the O-deficient air strata; however, when the animals received the vitamins before the lifting the tissue respiration was nearly normal. The resistance of the organism against anoxia was also studied on human beings. Nine persons received with the diet (20-30 min. before the expt.) I 20, II 10, III 10, IV 50, V 10, and vitamins B_2 2, B_6 5, B_{12} 15, P 50, and C 100 mg./person, resp., and then were lifted 2 times (with 3-5 days in between) 5000 m. high. Pulse rate, vomiting, over-all well-feeling and tachystoscopic observations showed that the human organism is also more resistant against anoxia when supplied with the water-sol. vitamins.

E. Wierbicki

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6



KOSMOLINSKIY, F. P.

Conditional reflex activity in white rats caused by administration of thiamine during hypoxia. F. P. Kosmolinskii (Central Inst. Improvement Physicians, Moscow). Voprosy Pitaniya 15, No. 5, 64-6(1956).—White rats which received 1 mg. thiamine bromide (I)/100 g. body wt. for 30-45 days developed rapidly motor-conditioned pos. and defensive reflexes (hearing, vision). I shortened the latent period of the conditioned reflexes and increased their intensity. After developing of the conditioned reflex stereotype the rats were brought in the barocell of Kolyaeski to the altitudes of 8, 10, and 11 × 10³ m. for 2 hrs. 30 min. before the hypoxia the animals received subcutaneously 1 mg. I. Under these conditions in 7 exptl. animals none was killed and only 2 showed full lack of the conditioned reflexes, while from the same no. of the control animals 3 were killed and 3 were deprived of the conditioned reflex activity. To decrease the natural resistance of the central nerve system against O deficiency the control animals were injected 30 min. before the expt. with phenamine (II), 0.05 mg./100 g. body wt., and the exptl. animals with I, and with I + II in the same indicated. At 12000 m. altitude the animals injected with II died after 20-45 min., with I and II after 1-1½ hrs., and with I alone after 1½-2 hrs. Thus, I increases the organism's resistance against hypoxia.

—E. Wierbicki.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, E. P.

Effect of thiamine on the process of tissu[e] respiration during hypoxia. E. P. Kosmolinskiĭ (Centr[al] Inst. Improvement Physicians, Moscow). *Voprosy* [Pitaniya] 15, No. 5, 73-5(1950).—Oxygen absorption (Q_{O_2}) by various tissues of white rats was studied as regards the effect of thiamine (I) (3 mg./100 g. body wt.) and the deficiency (holding of the animals at simulated altitude of 1[0],000 m. for 3 hrs.). The following Q_{O_2} values were obtained for slices of kidneys, liver, and brain: control—9.95, 5.3[8], and 4.23; subcutaneous injection of I, but no anoxia (40 m[in]. after the I injection)—10.4, 5.09, and 4.05; control animals exposed to the high altitude (O deficiency)—11.33, 6.91, and 6.31; and the exptl. animals (with I) exposed to the O deficiency—11.12, 6.52, and 4.62 cu. mm. per mg. of dry tissue, resp. Activities of the tissue enzymes, succinic acid dehydrogenase (II), and cytochrome oxidase were greatly decreased by the altitude exposure. Administration of I increases the enzyme activities; this decreases the altitude effect. I increases particularly the activity of II in the tissue of basal cores of brain. B. Verbicki

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSNOLINSKIY, F.P., kand.med.nauk

International symposium on the physiology of labor. Gig. i san. 23 no.9:51-56 S '58 (MIRA 11:11)
(WORK,
physiol. of work, conf. (Rus))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F.P., kand. med. nauk, polkovnik meditsinskoy sluzhby

Symposium on "Vitamins and wounds.". Voen. med. zhur. no.4:94 Ap '59. (MIRA 12:8)

(WOUNDS--TREATMENT)
(VITAMINS)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F.P.

Medical and biological problems of space flight. Khim. med. 38 no.5:8-12 My '60. (MIRA 13:12)
(SPACE BIOLOGY)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F.P., kandidat meditsinskikh nauk, polkovnik meditsinskoy sluzhby

"How to pressure the flyer's health" by A.I. Severskii. Reviewed by F.P. Kosmolinskii. Voen.-med. zhur. no.5:94-95 My '60. (MIRA 13:7)

(AVIATION MEDICINE) (SEVERSKII, A.I.)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F.P. (Moskva)

Vitamin P as an effective substance for raising body resistance to oxygen deficiency. Vop. pit. 20 no.5:44-47 S-O '61. (MIRA 14:10)
(VITAMINS--P) (ANOXEMIA)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F., kand. med. nauk, polkovnik meditsinskoy sluzhby;
MAZIN, A., polkovnik meditsinskoy sluzhby

Keep heart and nerves well in hand. Kryl. rod. 14 no.5:34-36
My '63. (MIRA 16:7)

(Parachuting)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, F., kand.med.nauk

The first space scouts. Av.i kosm. 45 no.2:89-90 F '63.
(MIRA 16:2)
(Space flight)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSHOLINSKIY, F.P., polkovnik meditsinskoy sluzhby, kand. med. nauk;
PETROVYKH, V.A., polkovnik meditsinskoy sluzhby, kand. med. nauk

Means to increase working capacity and their practical significance for the flying personnel. Voen.-med. zhur. no. 1:57-59 Ja '66 (MIRA 19:1)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 47295-66 EEC(k)-2/EWT(1)/FSS-2 SCTB TT/DD/RD/GW

ACC NR: AP6032042 SOURCE CODE: UR/0245/66/000/005/0067/0071

AUTHOR: Gorbov, F. D. (Moscow); Kosmolinskiy, F. P. (Moscow); Myasnikov, V. I. (Moscow)

41
B

ORG: none

TITLE: Some characteristics of the effect of increased and decreased afferentation on the human organism from the standpoint of space psychophysiology

SOURCE: Voprosy psikhologii, no. 5, 1966, 67-71

TOPIC TAGS: human physiology, space physiology, space psychology, psychologic stress, isolation test, HUMAN SENSE, PSYCHOPHYSIOLOGY

ABSTRACT: Characteristics of human reactions to increased and decreased afferentation were studied using a variety of approaches. Formation of the "man—spacecraft—surrounding atmosphere" concept was studied in experiments with centrifuges and special testing units of the author's invention [not described]. In order to produce an excess of sensory information, various types of communication were imitated and interference close to the signal frequency being used was introduced. Results of these experiments were compared with data from sensory deprivation experiments and requirements for good nervous tolerance of changes in afferentation were formulated. Studies have shown that sensory deprivation produces important psychophysiological shifts, including lowered work capacity, loss of general tone, and appearance of apathy.

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

However, it is considered that the high degree of motivation associated with actual spaceflight will prevent the occurrence of pathological states such as depression, hallucination, and personality disintegration. The cosmonaut selection and training program is also mentioned as a factor in preventing severe psychic disturbances during prolonged isolation. Spaceflight situations presenting the cosmonaut with an excess of sensory information occur routinely during radiocommunication with Earth, during repair work or special scientific investigations, or in any complex spaceflight situation. In-flight aircraft refueling is considered a good model of a stress situation because it requires attention, accurate work, and a high degree of motor coordination. Furthermore, the refueling operation is usually performed when the pilot is in a state of poor physiological tone due to previous use of the automatic pilot. While refueling, pilots are under great emotional stress, and physiological limits are pushed (heart beat up to 160—186 beats/min, breathing rate up to 40—50 times/min, weight loss up to 5—7% of total). Psychophysiological analysis of these data reveals two main reasons for the acute strain. First, the pilot is upset by the narrowing of his field of vision to include the other aircraft. Secondly, psychological difficulty is created by the combination of two types of activity, the well-known habits of normal piloting and the unfamiliar tasks associated with refueling. Several preventive measures for avoiding nervous and emotional strain in conditions of sensory deprivation or excess information are suggested. First, the necessary postural and motor habits must be acquired, and the cosmonaut must learn to program situations correctly in advance. Stress can be avoided if the optimum work-rest regimes are observed and special patterns of motor activity are followed.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

L 47295-66

ACC NR: AP6032042 O

In order to increase general physiological supplementary tone and to reduce nervous tension, the following amounts of vitamins are recommended: 300 mg of ascorbic acid, 50—150 mg of vitamin P, 25 mg of vitamin B_1, and others. [JS]

SUB CODE: 05, 06/ SUBM DATE: none/ ORIG REF: 010/ OTH REF: 005/ ATD PRESS: 5092

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, L.V.; SHUSHKINA, Ye.N.; KOPYLOV, Ye.P.; KOVRAYSKAYA, N. L.; LAZARYANTS, E.G.; FARBEROV, M.I.

Use of a synthetic emulsifier with a base of di-tert-butylbenzoic acid for the synthesis of all-purpose rubbers. Kauch. i rez. 22 no. 11:11-14 N '63. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka i Yaroslavskiy tekhnologicheskiy institut.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

AL'BAM, M.A.; PISARENKO, A.P.; LAZARYANTS. E.G.; Prinimali uchastiye: ALADINSKAYA, I.P.; VOLKOVA, S.A.; DYUNINA, V.G.; GROMOVA, V.A.; KOSMODEM'YANSKIY, L.V.; KOPYLOV, Ye.P.; ROKHMISTROVA, A.P.; SHUSHKINA, Ye.N.

High-styrene rubber mixtures for the manufacture of microporous non-shrinking rubbers. Kauch. i rez. 22 no.7:1-3 Jl '63. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi i Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka.
(Rubber, Synthetic)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, V.A.

Working a shaft with automatic skip-winding. Transp. stroi. 12 no.12:19-21 D '62. (MIRA 16:1)

1. Glavnyy mekhanik Stroitel'nogo upravleniya Leningradskogo metropolitena.
(Leningrad--Subways) (Hoisting machinery)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODEM'YANSKIY, V.A. (Moskva)

A certain type of variational problems. Prikl. mat. i mekh. 27 no.6: 1111-1116 N-D '63. (MIRA 17:1)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

ACCESSION NR: AP4036718 S/0020/64/156/002/0286/0289

AUTHOR: Kosmodem'yanskiy, V. A.

TITLE: On the theory of multistage rockets

SOURCE: AN SSSR. Doklady*, v. 156, no. 2, 1964, 286-289

TOPIC TAGS: rocket, rocket control theory, multistage rocket, flight dynamics, rocket flight

ABSTRACT: Let the motion of a multi-stage rocket be determined by ordinary first order differential equations

$$g_s = \dot{x}_s - f_s(x_1, \ldots, x_n, u_1, \ldots, u_m, t) = 0 \quad (s = 1, \ldots, n) \qquad (1,1)$$

and a set of constraints

$$\psi_k = \psi_k(u_1, \ldots, u_m, t) = 0 \quad (k = 1, \ldots, r < m). \qquad (1,2)$$

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

ACCESSION NR: AP4036718

where $x_s(t)$ are the coordinates of the dynamic system and $u_i(t)$ is the control function having discontinuities of the first kind at times t_i, ... such that m-r of the u_j are given explicitly in terms of t and t_i. Let the state of the system at $t = t_0$ be determined by the initial values

$$x_s(t_0) = x_s^0 \ (s = 1, \ldots, n) \qquad u_j(t_0) = u_j^0 \ (j = 1, \ldots, m).$$

Then, at time T, the coordinates are related by certain equations

$$\Phi_l = \Phi_l[x_s(T), T] = 0 \quad (l = 1, \ldots, p < n). \qquad (1,3)$$

The problem is to find the (optimal) values of t_i (i.e., choosing the best rocket stages) corresponding to an extremal value of a functional $J = J[x_s(T), T]$, subject to (1.1) and (1.2). For example, J may be the distance travelled, or the altitude, or the horizontal velocity at T. By the use of the auxiliary functional

$$I = J + \sum_{l=1}^{p} \rho_l \Phi_l + \int_{t_0}^{T} \left\{ \sum_{s=1}^{n} \lambda_s g_s + \sum_{k=1}^{r} \mu_k \psi_k \right\} dt, \qquad (2,1)$$

Card 2/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

ACCESSION NR: AP4036718

where $\lambda_s(t)$, $\mu_k(t)$, γ_l are undetermined Lagrange multipliers, the problem is reduced to a variational problem of the Bolza-Mayer type. Assuming the rocket has three stages, the author derives equations for the variations of the coordinates at the points of discontinuity. Then, after choosing some of the multipliers in such a way that certain coefficients in δI are 0 and setting the remaining multipliers equal to 0, he is led to a system of differential and integro-differential equations which solve the problem. The theory is applied to the example of a two-stage rocket in a uniform gravitational field with no resistance of the medium. Here the function u(t) is the ratio of the variable mass of the rocket at time t to its initial mass. u drops suddenly at t_1 (time at which the first stage is dropped), and is assumed to decrease linearly for other values of t. Orig. art. has: 1 figure and 21 formulas.

ASSOCIATION: None

SUBMITTED: 09Mar63	ATD PRESS: 3048	ENCL: 00
SUB CODE: ME, GM	NO REF SOV: 001	OTHER: 002

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

USSR/Engineering - Metallography FD-2240

Card 1/1 Pub 41-8/17

Author : Kornilov, I. I. and Kosmodem'yanskiy, V. V., Moscow

Title : Relationship between composition, temperature, and heat resistance. II. Ternary system Nickel-Chromium-Titanium alloys

Periodical : Izv. AN SSSR, Otd. Tekh. Nauk 2, 96-97, Feb 1955

Abstract : Studies the relationship between composition, structure, and heat resistance of Ni-Cr-Ti ternary system alloys over a wide temperature range (500-1200°). Twenty different alloys were tested. The chromium content was constant at 20% while titanium content was varied from 0% to 10%. Ritanium solubility was investigated at the following temperatures: 700°, 800°, 900°, 1000°, 1100°, and 1200°. Diagrams. Eight references, 7 USSR.

Institution:

Submitted : January 21, 1955

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMODINSKIY, Vladimir Nikolayevich; KASHKIN, P.N., prof., nauchnyy red.; VOROB'YEV, G.S., red.; GUDZHIYEVA, A.M., tekhn. red.

[Riddles of life of the world of the invisible]Zagadki zhizni mira nevidimykh. Leningrad, Ob-vo po rasprostraneniiu polit. i nauchn. znanii RSFSR, 1962. 52 p. (MIRA 15:12)
(MICRO-ORGANISMS)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

ACCESSION NR: AT4042676 S/0000/63/000/000/0165/0169

AUTHOR: Dlusskaya, I. G., Kosmolinskiy, F. L., Fedorov, N. A.

TITLE: Some data on the excretion of 17-hydroxycorticosteroids during a study of the efficiency of flight crews on long night flights

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 165-169

TOPIC TAGS: flight crew efficiency, flying time, homeostasis, neuroendocrine system, pituitary activity, adrenal activity, ACTH, corticosteroid production, hydroxycorticosteroid excretion, stress, hormone balance, night flying

ABSTRACT: During a study of the efficiency of nighttime flight crews, attention was directed towards the problem of homeostasis, in which the neuroendocrine system and particularly the pituitary-adrenal axis play an important role. In order to evaluate the effects of stress on ACTH and hence on glucorticoid production, the authors determined the free and bound 17-hydroxycorticosteroids in urine samples taken immediately before take-off, after landing and during the first 6 hours after landing from crews participating in long-distance night flights. In general, the results showed a relatively low level of hormone

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

ACCESSION NR: AT4042676

excretion during flight, and a significant increase after landing, a 50-150% increase being observed during the first 6 hours after landing in 12 out of 16 cases. In 2 crew members and 3 flight commanders, however, there was a significant increase (80-500%) in hormone excretion during flight. The authors noted a definite relationship between hormone excretion and the emotional state of the crew, and suggest that the increased excretion noted in some pilots and flight commanders is due to their increased responsibilities during prolonged complex operations.

ASSOCIATION: None

SUBMITTED: 27Sep63 ENCL: 00

SUB CODE: LS NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOLINSKIY, P.F.

KOSMOLINSKIY, P.F., polkovnik meditsinskoy sluzhby

Disorders of vascular tonus in enlisted personnel. Voen.-med.zhur. no.8:44-46 Ag '57. (MIRA 10:12)

(NEUROCIRCULATORY ASTHENIA, epidemiology, in armed forces personnel (Rus))
(ARMED FORCES PERSONNEL, diseases, hypertensive dis. & neurocirc. asthenia (Rus))
(HYPERTENSION, epidemiology, in armed forces personnel (Rus))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

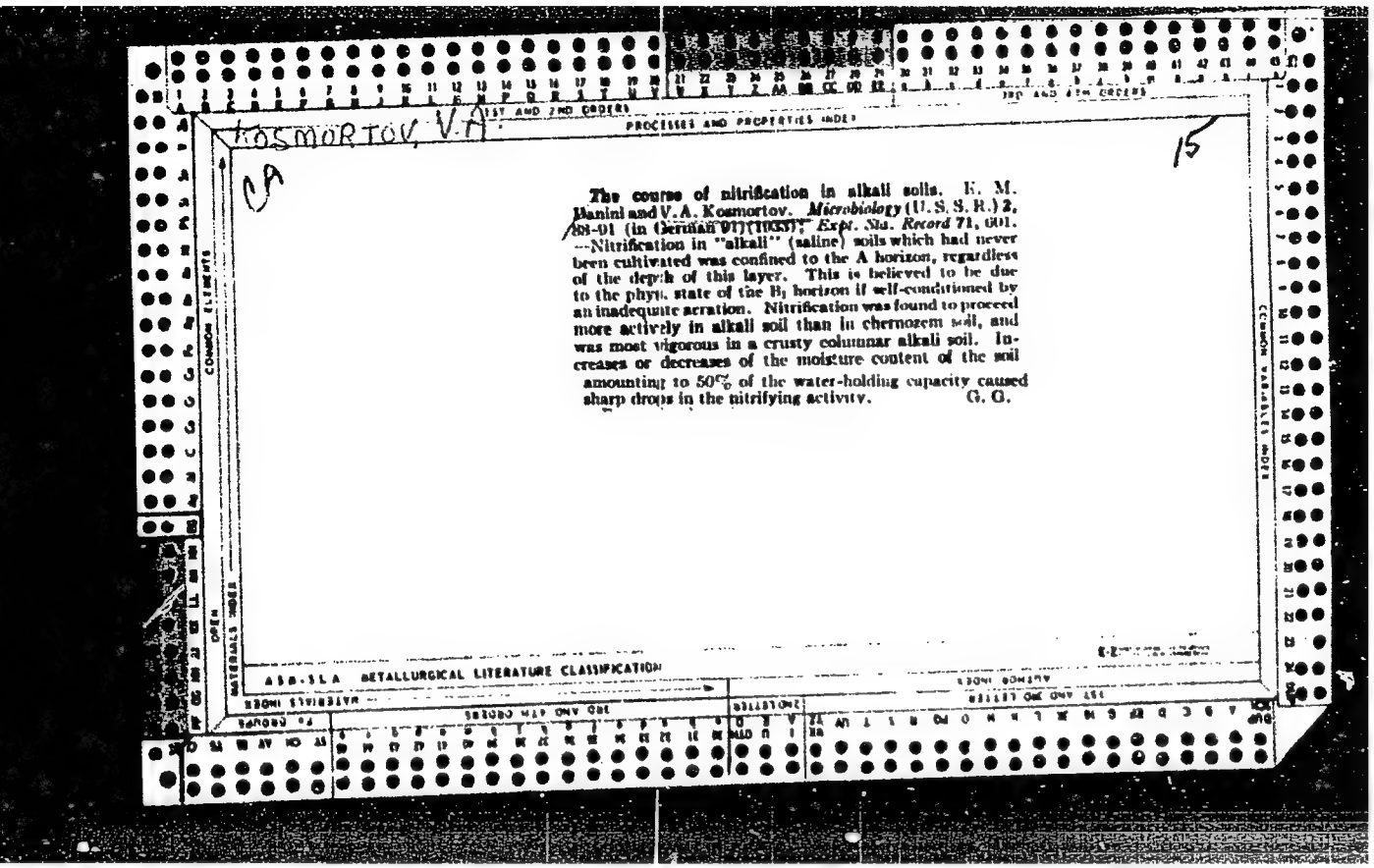
KOSMOLSKA, K.

Free amino acids in the gastrointestinal contents of chickens on various feeds. Acta physiol.polon. 11 no.5/6:782-783 '60.

1. Z Katedry Fizjologii Zwierzat S.G.G.W. w Warszawie. Kierownik: prof.dr B.Gutowski.
(AMINO ACIDS)
(GASTROINTESTINAL SYSTEM)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6



KOSMORTOV, V.A.

15

The course of nitrification in alkali soils. E. M. Panini and V. A. Kosmortov. *Microbiology* (U. S. S. R.) **2**, 88-91 (in German 91) (1933); *Exptl. Sta. Record* **71**, 601. —Nitrification in "alkali" (saline) soils which had never been cultivated was confined to the A horizon, regardless of the depth of this layer. This is believed to be due to the phys. state of the B_1 horizon if self-conditioned by an inadequate aeration. Nitrification was found to proceed more actively in alkali soil than in chernozem soil, and was most vigorous in a crusty columnar alkali soil. Increases or decreases of the moisture content of the soil amounting to 50% of the water-holding capacity caused sharp drops in the nitrifying activity. G. G.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMORTOV, V.A.

[Growing potatoes in the Komi A.S.S.R.] Agrotekhnika kartofelia v Komi ASSR. Syktyvkar, Komi gos.izd-vo, 1950. 23 p. (MIRA 14:7)

(Komi A.S.S.R.—Potatoes)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMARTOV, V A
~~KOSMARTOV, V. A.~~

KOSMARTOV, V. A. - "Potatoes in the Komi ASSR." Syktyvkar, 1955. All-Union Order of Lenin Academy of Agricultural Science imeni V. I. Lenin. All-Union Inst of Plant Growing. (Dissertations for degree of Candidate of Agricultural Sciences)

SO: Knizhnaya letopis', No 46. 26 November 1955. Moscow.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMORTOVA, A.P.; LEVICHKVA, V.S.; P'YANKOV, P.I.

Synthomycin for treating typhus and paratyphoid diseases. Klin.med. 35 [i.e.34] no.1 Supplement:33 Ja '57. (MIRA 11:2)

1. Iz kliniki infektsionnykh bolezney (zav. - prof. I.A.Leont'yev) Molotovskogo meditsinskogo instituta.
(CHLOROMYCETIN) (TYPHUS)
(PARATYPHOID FEVER)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOVICH, L.S.; DMITRIYEV, V.I.

Pistonless electric hydraulic crane. Mashinostroitel' no.9:29 S '62. (MIRA 15:9)
(Electric cranes)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOVICH, L. S., inzh.; DMITRIYEV, V. I.

Pistonless electric hydraulic faucet. Vest. mashinostr. 42 no.10:86 O '62. (MIRA 15:10)

(Faucets)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOWSKA, Alina; NIEZGODA, Jerzy

Practical utilization of the equivalent failure rate method. Przegl elektroniki 4 no. 10/11:639-641 O-N '63.

1. Przemyslowy Instytut Elektroniki, Warszawa.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

FIRKOWICZ, Szymon, dr inz.; KOSMOWSKA, Alina

Distribution of certain measurable attributes of low-power electron tubes. Przegl elektroniki 4 no. 10/11: 635-638 O-N '63.

1. Przemyslowy Instytut Elektroniki, Warszawa.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

KOSMOWSKA, Alina

Tables for determination of the equivalent frequency of damages $h^* = F(\psi_{gr} = \bar{\psi} - 3\sigma^*\psi)$. Przegl elektroniki 4 no. 5/6: 293-297 My-Je '63.

1. Przemyslowy Instytut Elektroniki, Warszawa.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6

FIRKOWICZ, S.; KOSMOWSKA, A.

Statistical determination of the tolerance of measurable characteristics. Przem inst elektron prace 5 no.1:53-70 '64.

1. Department of Radio Engineering of the Industrial Institute of Electronics, Warsaw. Submitted January 13, 1964.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825120016-6"